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Water Levels for the Great Lakes and Montreal Harbour ... *a monthly bulletin from Canadian Hydrographic Service*

About the monthly Water Level bulletin

October Precipitation Over the Great Lakes

As a percentage of the long-term October average:

Great Lakes Basin 66%

Lake Erie (including Lake St. Clair) 94%

Lake Superior 80%

Lakes Michigan-Huron 55%

Lake Ontario 47%

Note: These figures are preliminary.

October Outflows

LEVEL news

Volume 8, Number 11 **November 9, 2000**

Most Lakes Decline by More than Average During October

Upper Lakes Fall Below Chart Datum

Water levels on the Great Lakes invariably decline at this time of year, due in the most part to high rates of evaporation caused by a combination of cool, dry air over the relatively warm water of the lakes. This year, however, below average precipitation during October contributed to a greater and more rapid seasonal decline on all lakes except for Lake Erie. Preliminary data show that rainfall over the Great Lakes basin was just 66% of average during October. Only the Lake Erie basin received rainfall within 10% of its monthly average amount.

The monthly mean water level of Lake Superior fell by 8 cm from September to October-more than twice the long-term average decline for this period of time. Lake Superior water levels are again below Chart Datum. The lake began November about 35 cm below its long-term average and just 11 cm above the lake's record low for this time of year which occurred in 1925.

The levels of Lakes Michigan-Huron and St. Clair declined about 4 cm more than average from September to October, falling 11 and 13 cm, respectively. Lakes Michigan-Huron levels also fell below Chart Datum during October.

At the beginning of November, Lakes Michigan-Huron were 52 cm below their long-term average and 7 cm below Chart Datum. The lakes began November about 27 cm above their period-of-record low level which was recorded in 1964.

Lake St. Clair began November about 20 cm below its long-term average level. Although St. Clair levels are below average, the current level of the lake is well above record lows.

Lake Erie was the only lake that declined less than average from September to October. Lake Erie levels fell 9 cm which is 1 cm less than average decline recorded for this time of year. At the beginning of November, Lake Erie was 5 cm below average, but up 6 cm compared to last year's level.

Lake Ontario levels declined significantly from September to October, falling 20 cm. As a result, the lake began November 7 cm below average following five months of above-average water level conditions.

From the Great Lakes

As a percentage of the long-term October average:

Lake Superior	68%
Lake Erie	94%
Lake Huron	84%
Lake Ontario	100%

Note: These figures are preliminary.

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Summary information for "LEVEL*news*"

Water Levels on the Upper Lakes Fall Below Chart Datum

Water levels on Lake Superior and Lakes Michigan-Huron fell below Chart Datum during October and are expected to remain so for at least the next 6 months. Boaters on these lakes and throughout the entire system should exercise caution especially during periods of strong winds when localized water levels can rise or fall significantly relative to the pre-storm level in a very short period of time.

Consistently below-average water level conditions on the upper Great Lakes have forced commercial ships to carry lighter loads. The current seasonal decline in levels will likely lead to further reductions in loads until navigation ceases for the winter in late December or early January. Low water levels can also cause problems for water intakes that were not designed to accommodate current conditions.

On a positive note as we enter the fall and winter storm season, the risk of flooding and storm damage to shoreline properties is very low on Lakes Superior, Michigan-Huron and St. Clair and low to moderate on Lakes Erie and Ontario.

Low St. Lawrence River Levels

Last month's low flows from Lake Ontario and other tributaries to the St. Lawrence River resulted in a new record low October monthly mean water level at the Port of Montréal for the 1967-2000 period of record. There were four days when the levels were below Chart Datum elevation, which is considered by shippers as the minimum necessary for their operations. When faced with insufficient depths, some ships will off-load part of their cargo at downstream ports to be transported by land. Declining water levels on Lake St. Louis and Lake St. Francis have also become a concern for Seaway navigation.

Lakes Superior and Ontario Regulation

Lake Superior's outflow will remain below average in November. The International Lake Superior Board of Control continues to follow the regulation plan, which sets monthly outflows taking into account water level conditions on Lake Superior and Lakes Michigan-Huron.

Lake Ontario's outflows are expected to be slightly below average in November and follow closely the regulation plan. However, flow increases by up to about 4% above plan flow may occur at times throughout the month to provide short-term increases in water levels at the Port of Montréal to assist shipping. The flow increases will draw from the 6 cm of water that the International St. Lawrence River Board of Control conserved on Lake Ontario earlier this year.

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Webmaster
Last Updated: 2000-12-14
Last Reviewed: 2000-12-14

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URL: http://www.on.ec.gc.ca/water/level-news/ln2000nov_e.html